



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/815,192	03/31/2004	Helmut Peise	3457-39RE	7933

27799 7590 10/07/2008
COHEN, PONTANI, LIEBERMAN & PAVANE LLP
551 FIFTH AVENUE
SUITE 1210
NEW YORK, NY 10176

EXAMINER

MERKLING, MATTHEW J

ART UNIT	PAPER NUMBER
----------	--------------

1795

MAIL DATE	DELIVERY MODE
-----------	---------------

10/07/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/815,192	Applicant(s) PEISE ET AL.	
	Examiner MATTHEW J. MERKLING	Art Unit 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 April 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Reissue Applications

1. Claims 1-7 are rejected under 35 U.S.C. 251 as being broadened in a reissue application filed outside the two year statutory period. The terms "entrained-flow gasification" and "fluidized bed" are not equivalents, meaning, the term "entrained-flow gasification" encompasses subject matter that is not encompassed by "fluidized bed". A claim is broader in scope than the original claims if it contains within its scope any conceivable product or process which would not have infringed the original patent. A claim is broadened if it is broader in any one respect even though it may be narrower in other respects.

2. In the instant case, as declared by Dr. Manfred Schingnitz in the paper filed 4/15/08 (see specifically paragraphs 5 and 6 on page 2), an entrained flow reactor encompasses subject matter that is not encompassed by a fluidized bed reactor. In other words, declaration explicitly discloses that an entrained flow gasification reactor is understood by one skilled in the art to be different (ie encompasses different subject matter).

Oath/Declaration

3. The reissue oath/declaration filed with this application is defective (see 37 CFR 1.175 and MPEP § 1414) because of the following:

Applicant's supplemental oath/declaration filed 4/15/08 fails to include the signatures of all of the inventors.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 1- 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Booker et al. (US 5,464,592) in view of Kummel et al. (US 4,188,915).

Regarding claims 1 and 2, Booker discloses an entrained-flow gasification reactor (10, see abstract) for gasification of carbon containing material (carbonaceous fuel, see abstract), the reactor comprising:

an entrained-flow gasification reaction chamber (combustion chamber, 13);
a refractory-grade lining (12, col. 2 lines 12-16) configured to form a first, upper part of said reaction chamber (see Fig. 1); and

a cooling wall (throat section, 31) configured to form a second, lower part of said reaction chamber (see Fig. 1), said second part of said reaction chamber

including a lower floor (see Fig. 2), and a lower outlet opening (21), said cooling wall including cooling coils (pipes, 32) connected in a gas-tight manner (welded together using webbing (39), col. 3 lines 24-28), said cooling coils being coated with a heat-conducting refractory layer (see coating on pipes (32) in Fig. 2, col. 3 lines 29-39) and operated, while being cooled by pressurized water (see abstract), and said refractory-grade lining extending downward in a direction parallel to sidewalls (walls 11 and 19) of said reactor chamber (see Figs. 1 and 2) over said cooling wall (the refractory lining is generally located over/above the cooling wall, see Fig. 2) in an area of said second part of said reaction chamber including an area of said lower floor (see Fig. 2 which illustrates the refractory lining extending parallel to the sidewall 19 of the chamber which is located in the area, or adjacent, the cooling wall lower floor), such that said refractory-grade lining (22) and said cooling wall (31) are joined in an overlapping fashion (see Fig. 2 where cooling wall 31 overlaps refractory lining).

While Booker discloses a refractory grade lining that is placed on the cooling wall (throat) in order to protect the cooling walls from thermal shock and erosion (col. 1 lines 54-61), Booker fails to explicitly disclose that the refractory material consists of ceramic.

Kummel also discloses a gasification reactor that is equipped with a cooling wall (1) lined with tubes (37).

Kummel teaches a ceramic refractory layer coated on the tubes (see abstract) as a preferable way of protecting the cooling tubes from damage due to thermal shock (col. 4 lines 53-65).

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the ceramic refractory layer of Kummel on the cooling wall of Booker as a preferable material to use in order to protect the cooling tubes of Booker from thermal shock.

Furthermore, regarding limitations recited in claims 1 and 2 which are directed to a manner of operating disclosed system, neither the manner of operating a disclosed device nor material or article worked upon further limit an apparatus claim. Said limitations do not differentiate apparatus claims from prior art. See MPEP §2114 and 2115. Further, process limitations do not have a patentable weight in an apparatus claim. See *Ex parte Thibault*, 164 USPQ 666, 667 (Bd. App. 1969) that states "Expressions relating the apparatus to contents thereof and to an intended operation are of no significance in determining patentability of the apparatus claim.

Regarding claim 3, Booker, as discussed in claim 1 above, further discloses the cooling wall comprises a double mantle design (see Fig. 2 where the cooling wall comprises an inclined floor mantle (adjacent to refractory (22)) and a vertical mantle leading out of the gasification reactor).

Regarding claim 4, Booker, as discussed in claim 1 above, further discloses the second part of the reaction chamber (cooling wall) includes a lower floor (see Fig. 2) and a lower outlet opening (see gas flow direction in Fig. 1).

Regarding claim 5, Booker, as discussed in claim 4 above, further discloses and illustrates that said cooling wall is limited to said lower outlet opening (see Figs. 1 and 2).

Regarding claim 6, Booker, as discussed in claim 4 above, further discloses a cylindrical mantle (shell, 11) surrounding said reaction chamber (see Fig. 1), and cooling means to cool said lower floor and lower outlet opening of said reaction chamber (see Fig. 1), said cooling means being connected in parallel with said cylindrical mantle (see flow direction in Fig. 1).

Regarding claim 7, Booker, as discussed in claim 1 above, further discloses said first part and said second part of said reaction chamber are the upper part and lower, part respectively of said reaction chamber (see Fig. 1).

Response to Arguments

7. Applicant's arguments filed 4/15/08 have been fully considered but they are not persuasive.

8. On page 10, 3rd paragraph, Applicant argues that Booker does not teach "said refractory-grade lining extending downward in a direction parallel to sidewalls of said reactor chamber over said cooling wall in an area of said second part of said reaction chamber including an area of said lower floor" and states that Booker discloses "a refractory liner 22 follows the gasifier floor". The examiner respectfully disagrees with this. As stated above in the rejection, the examiner interprets the term "sidewall" as a term encompassing the floor of the gasification reactor. As such, the refractory lining is lined across the sidewall/floor and is parallel to the sidewall/floor.

Conclusion

Art Unit: 1795

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension-of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MATTHEW J. MERKLING whose telephone number is (571)272-9813. The examiner can normally be reached on M-F 8:30-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alexa Neckel can be reached on (571) 272-1446. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1795

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. J. M./
Examiner, Art Unit 1795

/Alexa D. Neckel/
Supervisory Patent Examiner, Art Unit 1795